MEASUREMENT TECHNOLOGIES

AMBIENT AIR AND METEOROLOGICAL MONITORING
FOR
TRUE GEOTHERMAL ENERGY COMPANY
KILAUEA MIDDLE EAST RIFT ZONE, ISLAND OF HAWAII
FEBRUARY 1990 DATA REPORT

Submitted to:

Ms. Renee Taylor

True Geothermal Energy Company

Prepared by:

MEASUREMENT TECHNOLOGIES

May 1990

CN-137

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1.0 Introduction

Measurement Technologies has been contracted by True Geothermal Energy Company to conduct an air quality and meteorological monitoring program to support incremental exploration and development of the Kilauea Middle East Rift Zone Geothermal Resources Subzone (GRS), Puna District, Island of Hawaii. The data gathered in the monitoring program is being used in support of the exploration and possible development of the geothermal resource.

The monitoring program consists of two (2) monitoring sites. The first site (Site 1) is located in the Kaohe Homesteads area and the second site (Site 2) is located at the geothermal drilling and staging area D-1. The monitored parameters for each site are contained in Table 1-1. The sites are being operated consistent with the guidelines and requirements as outlined in the following documents:

- "Ambient Monitoring Guidelines for Prevention of Significant Deterioration (PSD)," U.S. EPA-450/4-80-012, November 1980.
- "Quality Assurance Handbook for Air Pollution Measurement Systems: Volume IV. Meteorological Measurements," U.S. EPA-600/4-82-060, February 1983.
- "Quality Assurance Handbook for Air Pollution Measurement Systems, Volume II," Ambient Air Specific Methods, U.S. EPA-600/4-77-027a, May 1977.

As part of the monitoring program, Measurement will submit monthly and quarterly reports to True Geothermal Energy Company. The reports will contain the monitoring data, results of the quarterly quality assurance audits and results of quality control activities such as SO2 and H2S gas analyzer precision checks, level 1 and 2 checks and multipoint calibration results.

TABLE 1-1 Monitored Parameters

PARAMETER	SITE 1	SITE 2 (MET)
HYDROGEN SULFIDE (H2S)	X	8 PLS
SULFUR DIOXIDE (SO2)	X	
WIND DIRECTION	X	X
WIND SPEED	X	X
VERTICAL WINDS		X
SIGMA THETA	X	X
SIGMA W		X
TEMPERATURE	X	
PRECIPITATION	X	
RAIN WATER (ANIONS & DISSOLVED METALS)	3 PLS	
METALS (ATMOSPHERIC PARTICULATE)	X	
TOTAL SUSPENDED PARTICULATES (TSP)	X	
INHALEABLE PARTICULATES (PM-10)	X	
RADON		X

Section 2.0 of this report contains a operations narrative of significant events and activities that occurred during the month of February. Section 3.0 of this report contains the data collected during the month with graphical presentations and data capture summaries. The data is presented by site numbers and may also be referred to by name. Site 1 and 2 names are Air Quality/Met and Met Site, respectively.

2.0 Operations Summary

This section discusses the operations of the two monitoring sites and any significant events that may affect data quality. A downtime summary is also provided.

2.1 Monthly Operations Summary

Site 1 operations were routine for the month of February. A blank rain water sample was sent in with the 2/1-15/90 and 2/16-28/90 water samples. The blank samples are numbered True 4-4 and True 4-5, respectively. Results of the analysis are shown in Tables 3-8 and 3-9. The metals filter analyses loadings and the particulate filter loadings for the month of February show in general insignificant concentrations and loadings for the compounds of interest in the program.

The SO2 analyzer which malfunctioned on January 28, 1990 was replaced on January 7, 1990. The data shown for H2S from 0000 hours on February 1, 1990 thru 1700 hour on February 7, 1990 is measuring total sulfur. The H2S analyzer was operated in this fashion to avoid the loss of either an H2S or SO2 episode. No significant levels of H2S or SO2 were observed in the month.

2.2 Downtime Summary

This section presents the down time summary by site. Down time is considered any time an analyzer or sensor is not collecting valid data. Down time includes calibration time, data lost due to data validation criteria such as insufficient data samples, sensors or analyzers operating outside of allowable limits, etc. Calibration and audit time and time lost due to maintenance and malfunctions is also considered down time. In addition, no hydrogen sulfide levels were observed on the dosimeter badges located at Site 2.

Data capture at both sites was excellent in February, with the exception of SO2. SO2 data capture was 74 percent in February due to a malfunctioning analyzer which had to be replaced. All other parameters had data capture rates exceeding 95 percent.

2.3 Major Activities

No major activities took place in the month of February.

3.0 Data Summary

Section 3.0 contains monthly summary reports and statistic tables for all of the major monitored parameters. In addition, graphical wind rose plots, rain water analyses results, total suspended (TSP) and inhaleable (PM-10) particulate loading and metals analyses are also contained in this section. The data and associated graphical presentations are presented by site. Each sites data is organized and presented as follows:

- Monthly Summary Report containing the hourly values for each day of the month. Dashes contained in the place of any data signifies that the data falls into a down time category previously discussed in Section 2.0. An asterisk sign in the wind sigma theta signifies calm wind conditions.

- A graphical wind rose presentation will immediately follow the Monthly Summary Report. The wind rose displays a graphical presentation of the wind speed and direction at each site.

- Summary Statistic Tables containing the highest and second highest measured values, lowest value, arithmetic mean and standard deviation, data recovery rates and percentile breakdowns of measured values.

- TSP and PM-10 particulate data showing loading of each filter along with the elemental analyses of each metals filter (Site 1 only).

- Rain water analyses results showing each sample collected and the results of the metals elemental and anion analyses (Site 1 only).

3.1 Air Quality/Meteorological Monitoring Data Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE WD (DEG) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	43	3	17	333	351	347	336	95	113	350	35	103	89	101	130	101	114	94	350	334	321	323	311	309
2	319	339	331	326	315	320	339	----	335	35	62	71	115	93	66	101	93	107	65	351	346	335	21	82
3	3	67	72	57	61	3	344	341	----	10	24	66	71	95	64	71	16	18	99	28	109	60	305	322
4	323	333	346	68	124	333	326	339	317	330	349	44	14	22	20	7	356	351	342	306	306	307	322	305
5	300	317	9	357	317	305	258	----	336	349	----	26	116	125	119	117	114	28	70	102	18	21	9	90
6	119	114	83	45	318	342	339	----	332	344	346	347	359	355	353	352	350	351	336	332	346	350	16	11
7	29	4	9	9	356	349	348	----	353	353	354	354	352	353	349	349	351	351	349	350	349	348	343	334
8	332	334	332	330	316	317	337	----	351	354	352	350	352	351	352	351	351	350	352	350	348	338	336	340
9	342	339	336	335	330	328	334	338	335	327	355	351	352	349	350	349	346	342	341	333	334	329	324	324
10	327	330	331	328	320	326	322	320	326	340	348	350	348	355	352	----	351	347	337	317	317	311	300	317
11	309	302	310	307	309	305	290	324	305	304	357	105	90	91	6	----	352	342	312	250	254	209	245	213
12	219	208	199	202	209	213	231	210	194	171	165	151	152	136	115	----	185	208	218	208	206	192	195	223
13	216	240	238	159	236	245	229	198	189	192	207	189	157	161	165	176	144	134	250	308	0	0	0	229
14	0	0	225	203	204	203	219	215	266	346	329	92	112	126	132	121	117	122	114	123	326	282	288	214
15	131	144	148	193	153	350	311	292	310	329	4	29	81	110	87	56	358	351	347	342	322	331	320	318
16	311	312	302	302	307	291	289	309	331	348	336	347	355	5	5	7	360	352	351	349	344	306	308	309
17	311	335	317	301	295	306	303	301	326	339	347	360	353	349	1	344	1	347	336	331	321	302	294	266
18	222	317	323	330	333	324	315	332	347	341	348	351	348	348	348	355	353	346	349	348	347	350	344	316
19	327	332	347	305	301	327	350	324	339	342	348	347	342	349	344	345	337	341	348	346	349	346	317	342
20	353	340	320	349	316	328	327	321	334	338	345	344	346	347	344	342	339	339	338	323	317	312	313	308
21	312	308	296	297	298	291	291	306	331	344	352	350	6	28	84	79	326	331	307	294	194	199	181	188
22	270	270	224	223	227	214	233	215	140	123	129	126	128	129	132	159	176	----	187	270	0	0	0	0
23	205	110	284	225	0	212	202	118	122	119	125	122	129	122	127	116	120	128	146	158	219	205	217	214
24	197	219	193	194	276	241	300	307	306	297	313	329	324	333	341	341	345	357	126	150	142	152	262	285
25	232	233	206	224	227	231	214	239	----	192	179	206	191	178	188	189	186	192	201	175	180	192	196	186
26	190	184	188	187	189	183	181	158	135	168	137	351	339	341	337	337	339	336	337	335	334	330	338	336
27	334	338	339	336	334	336	335	333	333	336	333	331	331	----	343	344	346	341	340	332	334	332	335	324
28	320	321	319	314	302	293	305	305	307	315	314	320	326	337	340	350	349	332	327	317	314	285	265	267

Table 3-1. Wind Direction Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE WS (MPH) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.6	1.3	1.2	1.2	2.3	1.1	1.5	0.4	0.6	1.8	1.2	1.8	0.8	1.2	2.7	2.4	2.5	1.0	1.9	1.8	2.4	2.2	2.4	2.3
2	1.3	1.9	1.3	3.4	2.2	3.6	4.1	----	3.0	1.1	1.1	1.5	2.7	2.2	1.5	1.7	1.5	1.6	1.0	1.6	1.7	1.9	1.1	0.9
3	1.6	0.8	1.1	0.9	0.6	1.6	1.8	1.4	----	1.6	1.7	1.8	1.5	1.9	1.4	1.1	2.4	1.7	1.0	0.8	0.5	0.8	0.9	2.2
4	0.6	1.1	0.5	0.1	0.2	1.1	1.1	1.0	2.3	2.8	2.8	1.3	1.5	1.8	2.0	2.3	3.0	2.9	2.5	2.1	2.8	3.1	2.2	2.4
5	1.3	1.8	0.6	0.5	0.9	1.0	0.1	----	3.2	2.9	----	1.2	1.6	2.1	2.6	2.7	1.3	1.1	1.1	0.3	0.8	0.8	1.7	0.9
6	2.2	1.7	0.7	0.3	1.3	1.9	1.3	----	4.7	4.2	5.7	5.4	3.6	3.9	4.8	4.1	4.3	5.0	6.1	6.7	4.5	4.0	1.8	1.7
7	1.9	1.7	2.3	1.7	3.2	3.7	4.5	----	4.9	4.8	6.0	6.8	7.0	7.4	8.6	7.9	7.4	6.7	6.5	5.7	5.7	5.9	5.5	5.0
8	4.9	5.7	3.8	4.3	4.3	4.5	5.2	----	7.4	7.9	8.4	8.6	9.6	----	8.1	8.7	7.3	6.8	7.4	7.0	6.3	5.6	6.3	6.1
9	6.0	6.6	6.6	5.4	5.9	6.4	6.4	6.8	6.3	5.7	5.8	6.7	7.0	7.9	8.1	8.2	7.8	7.4	5.8	6.2	5.4	6.1	5.8	6.1
10	6.1	6.2	6.1	5.9	5.4	5.0	5.6	5.5	6.0	7.0	7.0	6.4	6.7	5.5	5.8	----	6.1	6.2	4.7	4.2	4.4	4.2	2.8	4.4
11	3.4	2.7	1.6	2.4	2.0	2.0	1.2	3.1	2.7	2.7	0.9	1.2	1.2	1.8	1.6	----	1.8	0.9	0.5	0.1	0.4	0.4	0.5	0.3
12	0.6	1.0	1.1	1.1	0.5	0.3	0.6	0.4	0.6	1.3	1.7	2.7	2.8	2.3	2.0	----	1.4	0.6	0.4	0.2	0.3	0.4	0.6	0.2
13	0.3	0.3	0.2	0.0	0.1	0.5	0.5	0.6	2.3	2.5	2.1	3.4	2.6	2.6	2.9	2.7	1.2	0.6	0.2	0.1	0.0	0.0	0.0	0.1
14	0.0	0.0	0.4	0.3	0.4	0.1	0.5	0.4	0.1	0.9	0.4	1.1	3.5	3.1	3.9	3.1	2.8	1.9	1.4	0.4	1.0	0.2	0.6	0.6
15	1.5	1.0	0.7	0.3	0.2	0.9	1.9	1.6	1.8	2.4	1.3	1.5	1.2	1.9	1.3	1.3	2.7	3.5	3.1	2.8	2.9	2.8	2.9	2.7
16	2.8	2.1	1.9	2.3	2.3	1.8	1.5	2.9	5.5	4.3	1.7	2.8	2.7	3.0	2.8	2.5	2.7	2.6	3.1	1.7	1.4	0.6	1.3	1.9
17	2.2	1.8	2.5	2.2	0.7	1.9	1.7	2.0	3.7	4.5	3.3	2.1	3.2	1.8	3.6	2.9	1.8	2.3	1.3	1.5	1.8	1.1	0.7	0.4
18	0.2	1.5	3.5	4.2	4.9	4.2	2.3	1.6	4.7	6.0	5.4	6.4	6.5	5.6	4.3	4.6	7.0	7.4	5.4	4.7	4.1	4.9	5.3	1.4
19	3.1	3.5	2.1	0.4	0.3	2.4	0.7	3.8	6.5	8.5	7.3	6.1	6.7	6.0	6.3	5.5	6.0	4.7	4.0	4.4	3.2	1.3	1.8	2.9
20	1.3	1.4	3.6	4.0	2.5	3.2	3.0	4.0	6.4	6.4	6.7	7.1	7.6	6.5	6.4	7.0	7.1	6.0	5.0	5.2	4.2	3.7	3.7	3.6
21	3.5	3.2	2.0	1.7	1.3	0.9	1.1	1.5	4.4	5.1	4.2	3.0	1.9	1.1	0.5	0.4	1.8	3.3	1.4	0.5	0.2	0.2	0.6	0.4
22	0.0	0.0	0.1	0.1	0.2	0.0	0.0	0.2	1.1	2.0	1.5	2.2	2.3	2.9	2.2	1.3	1.1	----	0.0	0.0	0.0	0.0	0.0	0.0
23	0.0	0.0	0.0	0.1	0.0	0.0	0.1	1.0	1.0	2.4	2.5	2.3	3.2	2.7	3.1	2.5	2.0	1.7	0.7	1.0	0.0	0.0	0.0	0.2
24	0.8	0.1	0.3	0.2	0.6	0.7	1.8	3.1	2.9	1.4	1.7	4.3	4.1	4.2	4.0	4.0	4.1	1.0	0.5	0.7	1.4	1.7	0.7	0.7
25	0.3	0.6	0.5	0.3	0.8	0.6	0.2	0.3	----	1.2	1.7	1.0	2.2	2.4	2.6	1.7	1.9	2.0	1.9	1.8	1.6	1.2	1.4	1.5
26	2.8	2.9	3.0	2.8	2.4	1.7	1.5	1.1	0.7	0.9	1.6	1.0	4.5	5.6	8.9	8.9	9.0	8.7	8.9	8.6	8.7	8.2	7.7	7.8
27	8.1	7.1	7.1	7.7	7.7	7.1	7.7	8.0	7.8	7.0	7.1	5.9	5.8	----	6.0	6.0	6.0	5.6	5.9	5.7	5.8	6.1	6.0	4.7
28	4.5	4.4	4.1	3.3	1.7	1.1	1.3	1.5	1.4	2.1	2.8	4.1	5.6	10.5	8.4	6.5	4.6	4.2	4.1	3.0	3.2	0.7	0.6	0.3

Table 3-2. Wind Speed Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE Sigθ1 (deg) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	84.7	67.3	62.9	36.5	47.4	51.9	64.8	74.4	79.0	52.0	75.8	66.5	72.2	78.1	50.7	69.5	78.9	69.3	40.5	42.6	28.7	53.9	24.3	23.9
2	55.6	59.1	79.0	47.7	57.5	22.7	31.8	----	48.3	72.6	81.9	81.3	63.7	74.0	74.0	77.5	77.2	70.1	83.4	53.4	36.3	32.3	69.6	86.2
3	58.0	71.7	80.9	77.9	93.1	67.0	52.3	48.2	----	72.1	71.0	75.9	77.0	74.2	81.2	87.4	65.8	69.8	76.5	75.9	86.8	77.3	34.5	25.0
4	61.1	52.5	58.2	61.2	62.2	62.6	50.3	64.3	47.6	25.6	42.1	79.7	82.2	73.7	76.2	74.7	60.7	48.4	53.5	33.9	23.3	31.4	27.7	41.3
5	64.9	42.1	62.8	71.8	42.6	33.4	77.6	26.7	18.4	41.8	----	72.5	75.5	69.2	57.9	54.7	73.1	74.8	59.8	70.5	64.8	85.8	63.1	86.2
6	63.6	64.0	81.5	79.3	40.2	44.8	70.0	13.5	17.5	28.7	32.0	48.1	62.0	59.0	42.0	50.1	38.3	29.9	19.4	17.3	40.8	48.6	75.7	80.4
7	76.8	72.7	68.6	76.5	57.2	54.1	40.7	37.5	48.3	54.6	49.2	49.0	48.6	50.7	36.6	35.6	36.9	36.5	32.7	36.3	35.8	26.7	22.9	17.0
8	33.2	20.3	23.0	18.9	18.6	18.6	22.3	----	32.8	40.5	37.8	40.8	33.6	32.7	36.9	30.6	38.9	35.3	30.1	29.4	28.5	20.8	18.9	20.5
9	21.7	19.6	17.9	17.5	16.7	17.2	18.0	18.8	24.9	22.8	41.4	38.0	43.2	38.2	33.2	31.1	24.5	20.7	20.2	18.1	18.5	16.9	16.3	16.2
10	17.9	18.1	17.3	15.2	16.1	18.1	16.5	15.7	16.2	18.5	27.7	32.7	36.1	46.5	42.3	36.4	28.1	23.5	17.2	17.2	16.9	20.1	23.8	17.7
11	25.5	26.0	37.7	35.3	40.7	37.6	47.0	19.1	26.3	43.6	53.8	74.1	81.5	68.9	72.7	54.9	47.6	57.6	40.8	99.9	31.1	55.0	49.6	34.8
12	28.3	35.2	22.4	14.2	19.7	21.9	22.5	31.2	60.5	76.3	72.1	53.8	62.8	66.1	57.6	65.5	62.6	79.3	38.7	38.3	43.1	48.6	53.8	65.9
13	61.2	33.9	76.8	64.5	79.1	77.1	73.7	61.5	60.0	63.9	71.6	61.8	71.6	72.0	67.2	67.1	81.3	71.1	67.2	59.8	99.9	99.9	99.9	89.3
14	97.7	97.7	73.5	31.6	44.1	74.2	20.5	23.3	57.7	62.7	75.5	74.6	49.1	53.8	49.5	60.1	61.1	58.3	56.3	64.3	50.9	48.0	65.9	63.6
15	72.9	53.6	69.2	85.1	99.9	66.6	43.1	46.2	46.7	64.2	65.1	65.5	71.5	71.8	76.8	76.8	55.6	25.4	22.2	19.1	15.1	20.1	17.8	18.0
16	20.3	30.1	22.4	26.1	25.4	30.3	29.6	18.1	17.9	29.5	52.8	55.5	65.3	64.9	67.1	66.1	55.0	49.2	43.2	37.1	43.1	47.6	31.0	27.4
17	38.1	29.0	23.9	49.4	56.3	35.2	24.9	26.7	21.6	19.5	34.3	58.7	54.0	71.3	46.2	45.9	56.3	37.6	22.3	22.8	31.6	30.5	48.5	61.8
18	45.4	29.5	27.1	20.0	17.9	19.1	22.5	26.8	21.0	21.7	28.3	26.0	24.6	24.0	31.4	31.5	28.4	25.7	23.8	27.8	23.8	23.3	21.4	42.5
19	21.1	19.7	48.4	57.7	81.3	34.4	61.7	23.3	21.1	22.9	27.9	24.9	22.5	26.0	24.9	31.2	24.0	26.2	30.3	24.6	25.1	47.0	37.4	40.8
20	49.2	38.0	15.7	22.4	21.5	22.1	22.0	22.4	18.3	23.2	25.4	30.6	27.8	26.3	20.4	23.7	20.2	19.8	16.5	14.7	17.5	18.6	18.0	18.5
21	23.8	21.8	26.2	25.6	34.7	39.1	32.0	38.8	21.6	29.2	41.9	53.4	71.7	77.6	80.5	61.5	19.4	38.5	58.1	62.5	72.4	62.0	26.2	97.5
22	79.1	99.2	77.6	69.9	76.8	81.9	68.2	37.1	44.5	50.0	71.2	59.7	64.7	66.4	65.2	76.5	81.9	----	77.9	38.5	40.8	95.6	****	96.8
23	75.3	85.1	75.6	99.5	****	****	89.0	66.6	51.0	36.4	47.8	41.5	37.1	49.0	45.1	46.2	49.2	37.2	29.1	21.5	67.3	****	****	71.4
24	26.8	66.5	27.5	45.9	53.3	63.8	63.5	44.6	39.6	50.1	43.7	18.2	18.0	19.4	19.3	19.2	28.7	69.9	87.6	58.6	42.1	43.3	60.3	58.3
25	44.1	59.3	48.2	39.3	45.5	50.3	67.5	89.6	----	79.1	66.8	75.9	61.6	57.2	65.5	76.2	68.4	76.2	68.2	62.2	69.2	66.0	74.7	67.5
26	67.1	68.6	67.1	65.7	73.2	71.5	83.9	81.1	87.9	89.0	83.1	74.3	23.2	24.7	21.0	21.0	21.0	19.6	19.0	17.9	18.1	17.2	19.2	18.6
27	19.6	18.7	18.8	18.8	16.9	17.9	16.4	16.8	17.2	18.1	18.0	16.9	18.3	----	20.2	22.1	23.8	21.5	21.5	17.9	16.5	16.9	18.2	16.6
28	17.9	16.6	18.1	20.4	30.3	44.5	56.9	64.1	37.7	31.8	28.2	22.0	19.1	19.2	19.4	33.1	46.1	33.7	20.2	20.1	20.2	58.4	64.0	66.3

Table 3-3. Sigma Theta Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE TEMP (DEG F) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	66	66	65	65	66	66	66	66	67	69	70	72	71	73	72	70	70	68	68	66	66	66	66	66
2	66	66	66	65	65	65	64	----	65	68	67	70	70	71	72	71	70	68	67	67	67	67	67	67
3	66	66	66	65	66	66	66	66	----	69	70	72	71	71	71	71	68	67	66	66	66	65	65	65
4	65	65	65	65	64	64	64	64	65	67	69	68	71	70	71	71	73	73	65	63	63	63	63	63
5	63	64	64	64	64	63	63	----	68	69	70	69	72	71	70	71	68	67	66	65	65	65	65	65
6	65	65	65	64	63	64	64	----	68	67	68	70	72	72	72	71	70	66	64	63	64	64	65	64
7	64	64	65	64	65	64	64	----	66	67	68	69	70	65	69	68	68	66	64	63	63	62	62	60
8	59	59	59	59	59	59	59	----	65	67	68	69	67	66	65	65	66	65	64	63	62	61	61	61
9	61	60	59	60	60	60	61	61	62	63	69	69	71	70	70	67	67	66	64	61	60	60	60	61
10	61	61	61	60	59	59	59	59	64	67	66	69	70	70	71	----	70	67	63	61	61	59	59	59
11	59	59	58	59	58	57	57	59	60	65	70	71	71	71	68	----	67	65	62	60	60	60	59	58
12	58	58	58	57	57	57	57	58	69	71	72	73	74	73	69	----	66	66	63	63	63	63	63	63
13	62	63	63	63	63	63	64	66	65	68	71	73	73	73	73	72	71	70	65	64	63	62	61	61
14	60	60	60	61	61	61	60	60	66	73	73	76	75	75	75	75	74	74	67	66	66	66	65	65
15	66	65	64	64	64	64	63	63	63	70	71	71	74	74	74	74	73	68	66	65	65	65	64	64
16	64	63	63	63	63	62	61	64	70	69	71	74	76	75	75	74	72	69	66	65	65	64	64	64
17	64	63	62	63	63	62	63	63	66	69	69	71	68	72	72	73	70	67	66	65	65	64	64	63
18	63	63	63	63	63	62	62	64	68	67	65	65	64	64	64	63	64	63	62	62	63	62	61	59
19	59	59	58	56	55	57	57	61	64	66	68	67	65	64	64	63	63	63	63	62	61	60	60	61
20	59	59	59	59	59	59	59	60	62	64	66	68	67	65	64	65	64	63	62	61	61	60	60	59
21	59	59	59	59	59	59	59	60	65	68	69	69	69	67	66	65	65	63	61	61	61	60	60	59
22	60	60	60	59	59	60	60	62	69	71	70	70	71	72	70	68	67	----	64	63	63	63	63	62
23	62	63	63	62	62	63	63	63	66	68	68	67	68	70	70	69	69	67	65	63	61	60	59	60
24	60	60	62	62	61	60	59	59	61	64	64	64	65	65	65	64	63	63	62	62	63	63	62	62
25	63	63	63	63	63	63	63	65	----	69	70	68	69	72	71	70	70	69	69	68	68	68	68	68
26	68	68	69	68	68	69	68	69	69	69	70	70	66	66	67	66	66	66	65	65	65	64	64	63
27	63	63	63	62	62	62	62	62	62	62	63	63	63	----	64	64	63	62	62	62	62	62	62	61
28	61	61	61	61	61	61	61	62	62	63	63	64	63	63	63	63	63	62	62	62	62	62	62	63

Table 3-4. Ambient Temperature Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE RAIN (INCH) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.01	0.11	0.07	0.03	0.01	0.00	0.01	0.04	0.01	0.01	0.03	0.00	0.02	0.08	0.00	0.03	0.00	0.00	0.05	0.04	0.06	0.05	0.02	0.03
2	0.37	0.16	0.67	0.31	0.04	0.08	0.16	0.03	0.21	0.18	0.15	0.01	0.26	0.00	0.03	0.02	0.05	0.12	0.06	0.00	0.00	0.01	0.03	0.19
3	0.20	0.11	0.03	0.09	0.00	0.01	0.02	0.01	----	0.06	0.03	0.00	0.03	0.02	0.03	0.01	0.37	0.00	0.02	0.09	0.01	0.00	0.01	0.07
4	0.00	0.01	0.02	0.00	0.03	0.02	0.05	0.02	0.00	0.01	0.03	0.27	0.00	0.01	0.00	0.00	0.00	0.00	0.05	0.01	0.00	0.00	0.16	0.12
5	0.10	0.01	0.02	0.01	0.00	0.01	0.00	----	0.00	0.00	0.01	0.16	0.01	0.00	0.03	0.00	0.00	0.00	0.03	0.04	0.07	0.06	0.02	0.05
6	0.00	0.03	0.00	0.00	0.00	0.00	0.00	----	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.05	0.40	0.16	0.07	0.07
7	0.00	0.01	0.00	0.00	0.00	0.00	0.00	----	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.06	0.01	0.00	0.00	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
10	0.01	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	----	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
15	0.00	0.01	0.01	0.00	0.01	0.02	0.01	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.00	0.00
18	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00	0.03	0.06	0.15	0.00	0.02	0.01	0.07	0.10	0.01	0.03	0.08	0.20	0.27	0.27	0.19	0.22	0.08	0.07	0.08	0.03
25	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.01	0.22	0.56	0.06	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.08
26	0.08	0.04	0.00	0.11	0.05	0.06	0.15	0.36	0.55	0.22	0.25	0.24	0.96	0.33	0.27	0.11	0.14	0.21	0.02	0.01	0.03	0.02	0.03	0.02
27	0.01	0.01	0.03	0.01	0.02	0.01	0.02	0.03	0.01	0.00	0.00	0.00	0.00	----	0.03	0.10	0.04	0.01	0.05	0.05	0.04	0.10	0.01	0.02
28	0.04	0.05	0.03	0.05	0.05	0.06	0.05	0.05	0.07	0.06	0.05	0.05	0.10	0.11	0.17	0.44	0.24	0.65	0.13	0.11	0.09	0.09	0.15	0.08

Table 3-5. Precipitation Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE SO2 (PPB) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	5	13	11	0	----	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	----	----	----	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	15	24	5	4	3	3	2	2	1	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	----	----	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	----	----	----	----	----	0	0	0	0	0	0	0	0	0	0

Table 3-6. Sulfur Dioxide Monthly Summary Site 1

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 1 AQM TRUE H2S (PPB) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	----	----	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	----	0	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	----	----	0	0	0	0	0	0	0	0	0	0

Table 3-7. Hydrogen Sulfide Monthly Summary Site 1

HECO ENVIRONMENTAL LABORATORY
ENVIRONMENTAL DEPARTMENT
Rainwater Analysis Report

Report Date: March 12, 1990

Site: True/Geothermal
Pahoa, Hawaii

Sample Date: Feb. 15, 1990
(All 4 samples collected
from 2/1/90 - 2/15/90

Parameter	Concentration (ug/L) True 1-4	True 2-4	True 3-4	True 4-4
pH	4.90	4.80	5.05	6.25
Aluminum	<10.0	<10.0	<10.0	<10.0
Arsenic	<5.0	<5.0	<5.0	<5.0
Barium	<20.0	<20.0	<20.0	<20.0
Cadmium	<1.0	<1.0	<1.0	<1.0
Chromium	<4.0	<4.0	<4.0	<4.0
Copper	<10.0	<10.0	<10.0	<10.0
Iron	<10.0	<10.0	<10.0	<10.0
Lead	<5.0	<5.0	<5.0	<5.0
Magnesium	590	585	570	<100
Manganese	<2.0	<2.0	<2.0	<2.0
Mercury	<0.50	<0.50	<0.50	<0.50
Selenium	<5.0	<5.0	<5.0	<5.0
Silver	<2.0	<2.0	<2.0	<2.0
Sodium	5,850	5,840	5,680	460
Zinc	<10.0	<10.0	<10.0	<10.0
Bromide	<50	<50	<50	<50
Chloride	15,600	10,400	7,380	<15
Fluoride	15	26	18	5
Phosphate	<61	<61	<61	<61
Nitrite	<4	<4	<4	<4
Nitrate	<13	<13	<13	38
Sulfate	1,800	1,790	1,720	<206
Sulfite	<150	<150	<150	<150

Analyzed by: CK E.W. DK
C. Kishimoto/E. Wong/G. Kitsuwa

Approved by: _____
George Yasutome
Senior Chemist

Table 3-8. Rain Water Analyses Monthly Summary Site 1
02/01/1990 - 02/15/1990

HECO ENVIRONMENTAL LABORATORY
ENVIRONMENTAL DEPARTMENT
Rainwater Analysis Report

Report Date: March 12, 1990

Site: True/Geothermal
Pahoa, Hawaii

Sample Date: February 28, 1990
(All 4 samples collected
from 2/16/90 - 2/28/90

Parameter	Concentration (ug/L) True 1-5	True 2-5	True 3-5	True 4-5
pH	4.60	4.50	4.55	5.85
Aluminum	<10.0	<10.0	<10.0	<10.0
Arsenic	<5.0	<5.0	<5.0	<5.0
Barium	<20.0	<20.0	<20.0	<20.0
Cadmium	<1.0	<1.0	<1.0	<1.0
Chromium	<4.0	5.0	6.0	5.5
Copper	<10.0	<10.0	<10.0	<10.0
Iron	<10.0	<10.0	<10.0	<10.0
Lead	<5.0	<5.0	<5.0	<5.0
Magnesium	<100	<100	<100	<100
Manganese	<2.0	<2.0	<2.0	<2.0
Mercury	<0.50	<0.50	<0.50	<0.50
Selenium	<5.0	<5.0	<5.0	<5.0
Silver	<2.0	<2.0	<2.0	<2.0
Sodium	730	720	710	320
Zinc	<10.0	<10.0	<10.0	<10.0
Bromide	<50	<50	<50	<50
Chloride	497	485	545	<15
Fluoride	23	23	26	<5
Phosphate	<61	<61	<61	<61
Nitrite	<4	<4	<4	<4
Nitrate	<13	30	<13	41
Sulfate	1,990	1,820	1,728	<206
Sulfite	<150	<150	<150	<150

Analyzed by: C. Kishimoto/E. Wong/G. Kitsuwa

Approved by: _____
George Yasutome
Senior Chemist

Table 3-9. Rain Water Analyses Monthly Summary
02/16/90 - 02/28/90

295/01-004 PROTOCOL: 9 SA

SAMPLE ID: MZ181
PARTICLE SIZE: T
ANALYSIS ID: MZ181

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 23.+- 10. MICROGRAMS

ELEMENT	UG/CM2		UG/FILTER		PERCENT	
NA	.2281+-	.1188	2.920+-	1.521	12.6943+-	8.6124
MG	.0544+-	.0234	.696+-	.300	3.0275+-	1.8516
AL	.0000+-	.0048	.000+-	.061	.0000+-	.2671
SI	.0000+-	.0032	.000+-	.041	.0000+-	.1781
P	.0000+-	.0030	.000+-	.038	.0000+-	.1670
S	.0446+-	.0110	.571+-	.141	2.4821+-	1.2407
CL	.2956+-	.0346	3.784+-	.443	16.4508+-	7.4072
K	.0137+-	.0028	.175+-	.036	.7624+-	.3663
CA	.0109+-	.0020	.140+-	.026	.6066+-	.2863
TI	.0000+-	.0007	.000+-	.009	.0000+-	.0390
V	.0000+-	.0006	.000+-	.008	.0000+-	.0334
CR	.0004+-	.0005	.005+-	.006	.0223+-	.0295
MN	.0010+-	.0006	.013+-	.008	.0557+-	.0412
FE	.0148+-	.0017	.189+-	.022	.8237+-	.3704
CO	.0014+-	.0007	.018+-	.009	.0779+-	.0516
NI	.0011+-	.0006	.014+-	.008	.0612+-	.0427
CU	.0030+-	.0006	.038+-	.008	.1670+-	.0799
ZN	.0002+-	.0004	.003+-	.005	.0111+-	.0228
GA	.0000+-	.0003	.000+-	.004	.0000+-	.0167
GE	.0000+-	.0004	.000+-	.005	.0000+-	.0223
AS	.0003+-	.0013	.004+-	.017	.0167+-	.0727
SE	.0000+-	.0005	.000+-	.006	.0000+-	.0278
BR	.0008+-	.0006	.010+-	.008	.0445+-	.0386
RB	.0007+-	.0009	.009+-	.012	.0390+-	.0529
SR	.0000+-	.0010	.000+-	.013	.0000+-	.0557
Y	.0000+-	.0012	.000+-	.015	.0000+-	.0668
ZR	.0000+-	.0024	.000+-	.031	.0000+-	.1336
MO	.0000+-	.0047	.000+-	.060	.0000+-	.2616
PD	.0008+-	.0033	.010+-	.042	.0445+-	.1847
AG	.0047+-	.0045	.060+-	.058	.2616+-	.2750
CD	.0092+-	.0063	.118+-	.081	.5120+-	.4153
IN	.0126+-	.0063	.161+-	.081	.7012+-	.4646
SN	.0005+-	.0083	.006+-	.106	.0278+-	.4621
SB	.0287+-	.0144	.367+-	.184	1.5972+-	1.0604
BA	.0505+-	.0630	.646+-	.806	2.8104+-	3.7129
LA	.0000+-	.0520	.000+-	.666	.0000+-	2.8939
HG	.0000+-	.0011	.000+-	.014	.0000+-	.0612
PB	.0010+-	.0023	.013+-	.029	.0557+-	.1303

Table 3-10. Metals Filter Analyses February 4, 1990 Site 1

295/01-004 PROTOCOL: 9 SA

SAMPLE ID: MZ182
PARTICLE SIZE: T
ANALYSIS ID: MZ182

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 23.+- 10. MICROGRAMS

ELEMENT	UG/CM2		UG/FILTER		PERCENT	
NA	.2623+-	.1365	3.357+-	1.747	14.5976+-	9.8989
MG	.0333+-	.0157	.426+-	.201	1.8532+-	1.1885
AL	.0000+-	.0052	.000+-	.067	.0000+-	.2894
SI	.0000+-	.0030	.000+-	.038	.0000+-	.1670
P	.0000+-	.0029	.000+-	.037	.0000+-	.1614
S	.0150+-	.0113	.192+-	.145	.8348+-	.7261
CL	.5013+-	.0576	6.417+-	.737	27.8984+-	12.5462
K	.0159+-	.0030	.204+-	.038	.8849+-	.4194
CA	.0096+-	.0020	.123+-	.026	.5343+-	.2576
TI	.0004+-	.0007	.005+-	.009	.0223+-	.0401
V	.0008+-	.0005	.010+-	.006	.0445+-	.0339
CR	.0015+-	.0005	.019+-	.006	.0835+-	.0457
MN	.0003+-	.0006	.004+-	.008	.0167+-	.0342
FE	.0159+-	.0017	.204+-	.022	.8849+-	.3962
CO	.0000+-	.0007	.000+-	.009	.0000+-	.0390
NI	.0005+-	.0006	.006+-	.008	.0278+-	.0355
CU	.0032+-	.0006	.041+-	.008	.1781+-	.0843
ZN	.0000+-	.0004	.000+-	.005	.0000+-	.0223
GA	.0000+-	.0004	.000+-	.005	.0000+-	.0223
GE	.0002+-	.0004	.003+-	.005	.0111+-	.0228
AS	.0009+-	.0014	.012+-	.018	.0501+-	.0809
SE	.0000+-	.0005	.000+-	.006	.0000+-	.0278
BR	.0007+-	.0007	.009+-	.009	.0390+-	.0425
RB	.0001+-	.0009	.001+-	.012	.0056+-	.0501
SR	.0000+-	.0010	.000+-	.013	.0000+-	.0557
Y	.0016+-	.0011	.020+-	.014	.0890+-	.0724
ZR	.0000+-	.0026	.000+-	.033	.0000+-	.1447
MO	.0037+-	.0046	.047+-	.059	.2059+-	.2712
PD	.0000+-	.0036	.000+-	.046	.0000+-	.2003
AG	.0000+-	.0045	.000+-	.058	.0000+-	.2504
CD	.0122+-	.0061	.156+-	.078	.6790+-	.4499
IN	.0000+-	.0065	.000+-	.083	.0000+-	.3617
SN	.0037+-	.0083	.047+-	.106	.2059+-	.4705
SB	.0366+-	.0145	.468+-	.186	2.0369+-	1.1981
BA	.0000+-	.0629	.000+-	.805	.0000+-	3.5005
LA	.0000+-	.0520	.000+-	.666	.0000+-	2.8939
HG	.0000+-	.0012	.000+-	.015	.0000+-	.0668
PB	.0000+-	.0024	.000+-	.031	.0000+-	.1336

Table 3-11. Metals Filter Analyses February 10, 1990 Site 1

295/01-004 PROTOCOL: 9 SA

SAMPLE ID: MZ183
PARTICLE SIZE: T
ANALYSIS ID: MZ183

EXPOSED AREA: 12.80 SOUARE CM
MASS OF DEPOSIT: 17.+- 10. MICROGRAMS

ELEMENT	UG/CM2		UG/FILTER		PERCENT	
NA	.1319+-	.0715	1.688+-	.915	9.9313+-	7.9442
MG	.0265+-	.0131	.339+-	.168	1.9953+-	1.5331
AL	.0000+-	.0050	.000+-	.064	.0000+-	.3765
SI	.0000+-	.0030	.000+-	.038	.0000+-	.2259
P	.0013+-	.0029	.017+-	.037	.0979+-	.2258
S	.0306+-	.0112	.392+-	.143	2.3040+-	1.5962
CL	.2080+-	.0251	2.662+-	.321	15.6612+-	9.4043
K	.0094+-	.0024	.120+-	.031	.7078+-	.4539
CA	.0055+-	.0015	.070+-	.019	.4141+-	.2685
TI	.0000+-	.0007	.000+-	.009	.0000+-	.0527
V	.0000+-	.0006	.000+-	.008	.0000+-	.0452
CR	.0006+-	.0006	.008+-	.008	.0452+-	.0524
MN	.0000+-	.0007	.000+-	.009	.0000+-	.0527
FE	.0122+-	.0015	.156+-	.019	.9186+-	.5520
CO	.0021+-	.0007	.027+-	.009	.1581+-	.1069
NI	.0013+-	.0006	.017+-	.008	.0979+-	.0732
CU	.0060+-	.0008	.077+-	.010	.4518+-	.2725
ZN	.0000+-	.0004	.000+-	.005	.0000+-	.0301
GA	.0001+-	.0004	.001+-	.005	.0075+-	.0304
GE	.0001+-	.0004	.001+-	.005	.0075+-	.0304
AS	.0000+-	.0014	.000+-	.018	.0000+-	.1054
SE	.0000+-	.0006	.000+-	.008	.0000+-	.0452
BR	.0005+-	.0007	.006+-	.009	.0376+-	.0572
RB	.0000+-	.0009	.000+-	.012	.0000+-	.0678
SR	.0000+-	.0010	.000+-	.013	.0000+-	.0753
Y	.0000+-	.0012	.000+-	.015	.0000+-	.0904
ZR	.0000+-	.0025	.000+-	.032	.0000+-	.1882
MO	.0089+-	.0050	.114+-	.064	.6701+-	.5451
PD	.0000+-	.0034	.000+-	.044	.0000+-	.2560
AG	.0000+-	.0045	.000+-	.058	.0000+-	.3388
CD	.0000+-	.0063	.000+-	.081	.0000+-	.4744
IN	.0123+-	.0067	.157+-	.086	.9261+-	.7425
SN	.0034+-	.0085	.044+-	.109	.2560+-	.6575
SB	.0237+-	.0148	.303+-	.189	1.7845+-	1.5309
BA	.0443+-	.0640	.567+-	.819	3.3355+-	5.2030
LA	.1064+-	.0532	1.362+-	.681	8.0113+-	6.1849
HG	.0000+-	.0011	.000+-	.014	.0000+-	.0828
PB	.0047+-	.0024	.060+-	.031	.3539+-	.2757

Table 3-12. Metals Filter Analyses February 16, 1990 Site 1

295/01-004 PROTOCOL: 9 SA

SAMPLE ID: MZ154
PARTICLE SIZE: T
ANALYSIS ID: MZ154

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 22.+- 10. MICROGRAMS

ELEMENT	UG/CM2	UG/FILTER	PERCENT
NA	.0000+- .0253	.000+- .324	.0000+- 1.4720
MG	.0000+- .0079	.000+- .101	.0000+- .4596
AL	.0000+- .0051	.000+- .065	.0000+- .2967
SI	.0000+- .0032	.000+- .041	.0000+- .1862
P	.0012+- .0031	.015+- .040	.0698+- .1831
S	.2586+- .0328	3.310+- .420	15.0458+- 7.1003
CL	.0744+- .0109	.952+- .140	4.3287+- 2.0673
K	.0081+- .0023	.104+- .029	.4713+- .2526
CA	.0078+- .0017	.100+- .022	.4538+- .2288
TI	.0011+- .0007	.014+- .009	.0640+- .0500
V	.0006+- .0005	.008+- .006	.0349+- .0331
CR	.0012+- .0005	.015+- .006	.0698+- .0431
MN	.0000+- .0006	.000+- .008	.0000+- .0349
FE	.0152+- .0018	.195+- .023	.8844+- .4154
CO	.0007+- .0009	.009+- .012	.0407+- .0555
NI	.0009+- .0006	.012+- .008	.0524+- .0423
CU	.0058+- .0007	.074+- .009	.3375+- .1587
ZN	.0008+- .0005	.010+- .006	.0465+- .0360
GA	.0003+- .0004	.004+- .005	.0175+- .0246
GE	.0000+- .0004	.000+- .005	.0000+- .0233
AS	.0000+- .0014	.000+- .018	.0000+- .0815
SE	.0000+- .0006	.000+- .008	.0000+- .0349
BR	.0027+- .0007	.035+- .009	.1571+- .0822
RB	.0000+- .0010	.000+- .013	.0000+- .0582
SR	.0006+- .0011	.008+- .014	.0349+- .0659
Y	.0010+- .0012	.013+- .015	.0582+- .0747
ZR	.0000+- .0026	.000+- .033	.0000+- .1513
MO	.0086+- .0049	.110+- .063	.5004+- .3647
PD	.0057+- .0036	.073+- .046	.3316+- .2581
AG	.0174+- .0052	.223+- .067	1.0124+- .5507
CD	.0000+- .0070	.000+- .090	.0000+- .4073
IN	.0019+- .0072	.024+- .092	.1105+- .4219
SN	.0180+- .0090	.230+- .115	1.0473+- .7077
SB	.0000+- .0158	.000+- .202	.0000+- .9193
BA	.1207+- .0683	1.545+- .874	7.0225+- 5.0971
LA	.0000+- .0572	.000+- .732	.0000+- 3.3280
HG	.0000+- .0012	.000+- .015	.0000+- .0698
PB	.0026+- .0025	.033+- .032	.1513+- .1609

Table 3-13. Metals Filter Analyses February 22, 1990 Site 1

295/01-004 PROTOCOL: 9 SA

SAMPLE ID: MZ155
PARTICLE SIZE: T
ANALYSIS ID: MZ155

EXPOSED AREA: 12.80 SQUARE CM
MASS OF DEPOSIT: 3.+- 10. MICROGRAMS

ELEMENT	UG/CM2	UG/FILTER	PERCENT
NA	.0897+- .0503	1.148+- .644	38.2720+-128.717
MG	.0449+- .0196	.575+- .251	19.1573+-64.4030
AL	.0000+- .0050	.000+- .064	.0000+- 2.1333
SI	.0018+- .0032	.023+- .041	.7680+- 2.9013
P	.0000+- .0030	.000+- .038	.0000+- 1.2800
S	.0000+- .0102	.000+- .131	.0000+- 4.3520
CL	.0126+- .0054	.161+- .069	5.3760+-18.0675
K	.0033+- .0022	.042+- .028	1.4080+- 4.7863
CA	.0006+- .0013	.008+- .017	.2560+- 1.0178
TI	.0003+- .0007	.004+- .009	.1280+- .5208
V	.0000+- .0006	.000+- .008	.0000+- .2560
CR	.0016+- .0006	.020+- .008	.6827+- 2.2899
MN	.0000+- .0007	.000+- .009	.0000+- .2987
FE	.0126+- .0017	.161+- .022	5.3760+-17.9347
CO	.0005+- .0009	.006+- .012	.2133+- .8082
NI	.0014+- .0007	.018+- .009	.5973+- 2.0134
CU	.0052+- .0007	.067+- .009	2.2187+- 7.4016
ZN	.0009+- .0004	.012+- .005	.3840+- 1.2913
GA	.0000+- .0004	.000+- .005	.0000+- .1707
GE	.0006+- .0004	.008+- .005	.2560+- .8702
AS	.0000+- .0015	.000+- .019	.0000+- .6400
SE	.0000+- .0006	.000+- .008	.0000+- .2560
BR	.0003+- .0008	.004+- .010	.1280+- .5464
RB	.0008+- .0010	.010+- .013	.3413+- 1.2151
SR	.0004+- .0011	.005+- .014	.1707+- .7375
Y	.0000+- .0013	.000+- .017	.0000+- .5547
ZR	.0000+- .0028	.000+- .036	.0000+- 1.1947
MO	.0100+- .0054	.128+- .069	4.2667+-14.4076
PD	.0000+- .0036	.000+- .046	.0000+- 1.5360
AG	.0000+- .0050	.000+- .064	.0000+- 2.1333
CD	.0000+- .0067	.000+- .086	.0000+- 2.8587
IN	.0000+- .0076	.000+- .097	.0000+- 3.2427
SN	.0154+- .0092	.197+- .118	6.5707+-22.2512
SB	.0197+- .0158	.252+- .202	8.4053+-28.8174
BA	.0000+- .0691	.000+- .884	.0000+-29.4827
LA	.0234+- .0573	.300+- .733	9.9840+-41.2948
HG	.0005+- .0012	.006+- .015	.2133+- .8763
PB	.0079+- .0026	.101+- .033	3.3707+-11.2902

Table 3-14. Metals Filter Analyses February 28, 1990 Site 1

MEASUREMENT TECHNOLOGIES

8" X 10" FILTER GRAVIMETRIC REPORT

Run Day	NEA ID.	FILTER TYPE	TARE WT. GRAMS	GROSS WT. GRAMS	NET WT. MILLIGRAMS
02/04/90	MZ250	TSP	4.3352	4.3569	21.70
02/04/90	MZ251	PM-10	4.3604	4.3762	15.80
02/10/90	MZ252	TSP	4.3651	4.3973	32.20
02/10/90	MZ253	PM-10	4.3367	4.3585	21.80
02/16/90	MZ254	TSP	4.3330	4.3526	19.60
02/16/90	MZ255	PM-10	4.3333	4.3471	13.80
02/22/90	MZ256	TSP	4.3320	4.3620	30.00
02/22/90	MZ247	PM-10	4.3505	4.3752	24.70
02/28/90	MZ258	TSP	4.3676	4.3756	8.00
02/28/90	MZ259	PM-10	4.3447	4.3511	6.40

Table 3-15. Total Suspended Particulates (TSP) and Inhaleable Particulates (PM-10) Loading Monthly Summary Site 1

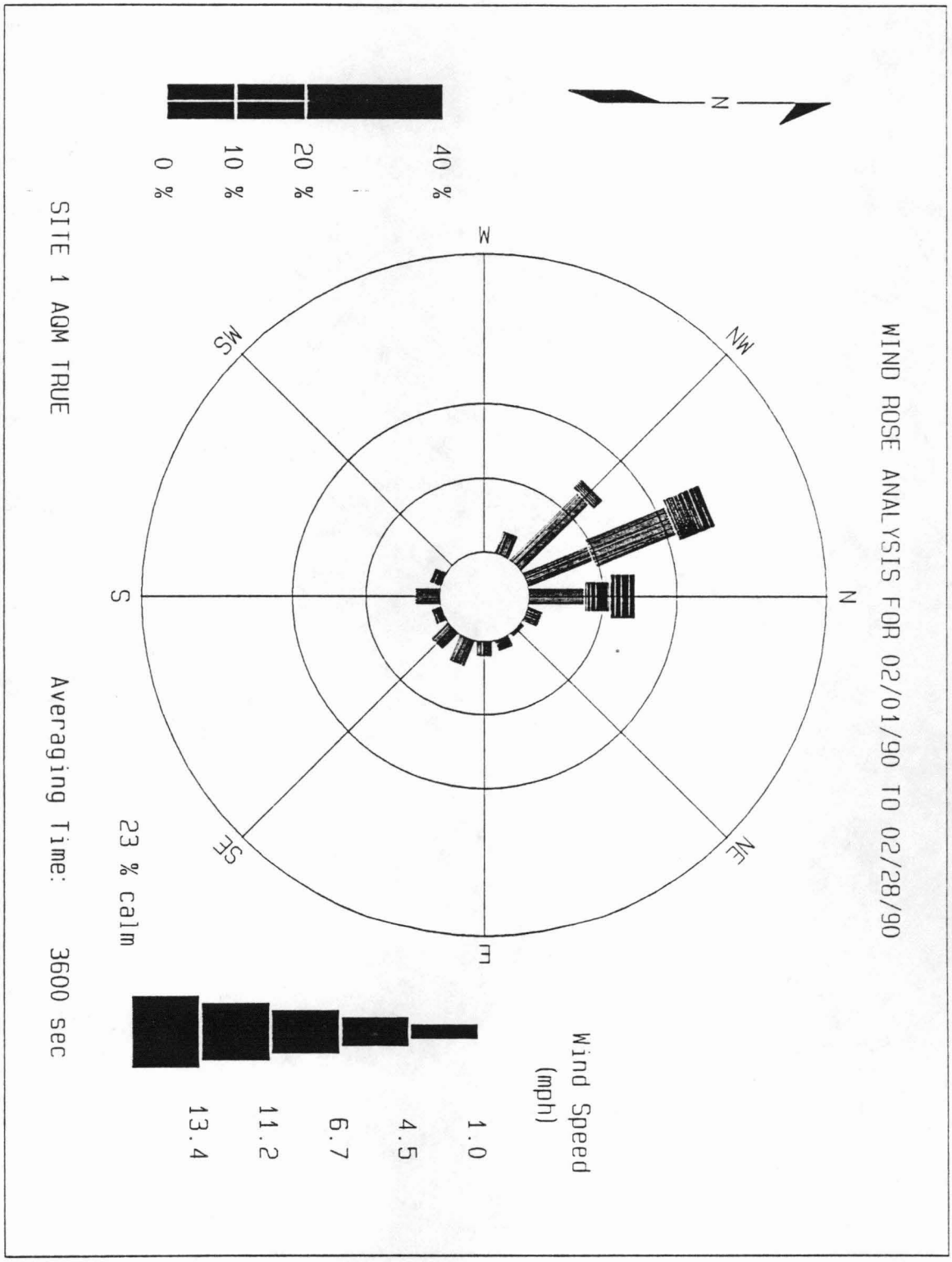

Figure 3-1. Wind Rose Analysis Site 1

WD (DEG) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	360.	02/16/90	16:00:00
Second Highest:	360.	02/17/90	11:00:00
Lowest Value:	0.	02/13/90	20:00:00

Arithmetic Mean:	252.	10.000 Percentile:	71.
Standard Deviation:	110.	20.000 Percentile:	131.
		30.000 Percentile:	199.
Geometric Mean:	191.	40.000 Percentile:	266.
Standard Deviation:	3.	50.000 Percentile:	309.
		60.000 Percentile:	326.
Valid Data:	659	70.000 Percentile:	335.
Invalid Data:	13	80.000 Percentile:	343.
Missing Data:	0	90.000 Percentile:	349.
Data Recovery:	98.07%	100.000 Percentile:	360.

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-16. Wind Direction Summary Statistics Site 1

WS (MPH) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	10.5	02/28/90	13:00:00
Second Highest:	9.6	02/08/90	12:00:00
Lowest Value:	0.0	02/13/90	03:00:00

Arithmetic Mean:	2.9	10.000 Percentile:	0.3
Standard Deviation:	2.4	20.000 Percentile:	0.8
		30.000 Percentile:	1.3
Geometric Mean:	2.0	40.000 Percentile:	1.7
Standard Deviation:	2.8	50.000 Percentile:	2.2
		60.000 Percentile:	2.8
Valid Data:	658	70.000 Percentile:	4.0
Invalid Data:	14	80.000 Percentile:	5.4
Missing Data:	0	90.000 Percentile:	6.5
Data Recovery:	97.92%	100.000 Percentile:	10.5

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-17. Wind Speed Summary Statistics Site 1

Sigé1 (deg) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	122.3	02/23/90	05:00:00
Second Highest:	120.9	02/23/90	04:00:00
Lowest Value:	13.5	02/06/90	07:00:00

Arithmetic Mean:	46.6	10.000 Percentile:	18.6
Standard Deviation:	23.4	20.000 Percentile:	22.1
		30.000 Percentile:	27.4
Geometric Mean:	40.6	40.000 Percentile:	35.3
Standard Deviation:	1.7	50.000 Percentile:	43.3
		60.000 Percentile:	53.4
Valid Data:	665	70.000 Percentile:	62.8
Invalid Data:	7	80.000 Percentile:	69.9
Missing Data:	0	90.000 Percentile:	77.2
Data Recovery:	98.96%	100.000 Percentile:	122.3

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-18. Sigma Theta Summary Statistics Site 1

TEMP (DEG F) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	76.0	02/14/90	11:00:00
Second Highest:	76.0	02/16/90	12:00:00
Lowest Value:	55.0	02/19/90	04:00:00

Arithmetic Mean:	64.9	10.000 Percentile:	59.7
Standard Deviation:	4.1	20.000 Percentile:	61.1
		30.000 Percentile:	62.8
Geometric Mean:	64.8	40.000 Percentile:	63.1
Standard Deviation:	1.1	50.000 Percentile:	64.0
		60.000 Percentile:	65.2
Valid Data:	660	70.000 Percentile:	67.0
Invalid Data:	12	80.000 Percentile:	68.9
Missing Data:	0	90.000 Percentile:	71.0
Data Recovery:	98.21%	100.000 Percentile:	76.0

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-19 Ambient Temperature Summary Statistics Site 1

RAIN (INCH) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	0.96	02/26/90	12:00:00
Second Highest:	0.67	02/02/90	02:00:00
Lowest Value:	0.00	02/01/90	05:00:00

Arithmetic Mean:	0.03	10.000 Percentile:	0.00
Standard Deviation:	0.08	20.000 Percentile:	0.00
		30.000 Percentile:	0.00
Geometric Mean:	0.00	40.000 Percentile:	0.00
Standard Deviation:	1.00	50.000 Percentile:	0.00
		60.000 Percentile:	0.00
Valid Data:	664	70.000 Percentile:	0.01
Invalid Data:	8	80.000 Percentile:	0.03
Missing Data:	0	90.000 Percentile:	0.08
Data Recovery:	98.81%	100.000 Percentile:	0.96

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-20. Precipitation Summary Statistics Site 1

SO2 (PPB) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	24.	02/24/90	05:00:00
Second Highest:	15.	02/24/90	04:00:00
Lowest Value:	0.	02/07/90	16:00:00

Arithmetic Mean:	0.	10.000 Percentile:	0.
Standard Deviation:	2.	20.000 Percentile:	0.
		30.000 Percentile:	0.
Geometric Mean:	1.	40.000 Percentile:	0.
Standard Deviation:	1.	50.000 Percentile:	0.
		60.000 Percentile:	0.
Valid Data:	497	70.000 Percentile:	0.
Invalid Data:	175	80.000 Percentile:	0.
Missing Data:	0	90.000 Percentile:	0.
Data Recovery:	73.96%	100.000 Percentile:	24.

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-21. Sulfur Dioxide Summary Statistics Site 1

H2S (PPB) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	0.	02/01/90	00:00:00		
Second Highest:	0.	02/01/90	01:00:00		
Lowest Value:	0.	02/01/90	00:00:00		
Arithmetic Mean:	0.		10.000 Percentile:		0.
Standard Deviation:	0.		20.000 Percentile:		0.
			30.000 Percentile:		0.
Geometric Mean:	0.		40.000 Percentile:		0.
Standard Deviation:	1.		50.000 Percentile:		0.
			60.000 Percentile:		0.
Valid Data:	657		70.000 Percentile:		0.
Invalid Data:	15		80.000 Percentile:		0.
Missing Data:	0		90.000 Percentile:		0.
Data Recovery:	97.77%		100.000 Percentile:		0.

SITE 1 AQM TRUE Averaging Time: 3600 sec

Table 3-22. Hydrogen Sulfide Summary Statistics Site 1

3.2 Meteorological Monitoring Data Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET WD (DEG) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	54	61	58	39	50	63	60	69	70	67	67	70	62	56	82	80	74	28	36	306	28	359	317	309
2	3	72	23	332	318	12	329	338	349	73	61	77	81	71	71	68	75	70	61	46	47	54	58	71
3	55	65	64	61	58	44	37	34	43	70	64	71	60	69	57	64	53	56	63	60	70	50	355	29
4	12	30	65	73	56	7	79	358	354	56	67	66	54	49	53	40	36	45	317	313	308	319	304	340
5	18	50	47	358	344	10	311	320	357	15	78	72	78	81	79	79	65	65	77	66	53	56	61	70
6	64	60	52	34	25	47	346	354	351	15	8	19	43	43	38	34	32	4	342	343	24	45	58	51
7	47	47	49	43	43	32	30	33	38	42	39	39	39	35	27	29	24	25	17	25	17	356	344	332
8	337	355	355	354	333	329	346	348	8	26	24	26	21	17	29	10	27	20	10	5	1	353	347	353
9	351	344	352	342	328	337	344	342	342	339	30	26	21	22	14	9	355	349	349	343	337	334	333	334
10	334	336	340	336	336	339	333	335	343	352	5	14	13	15	26	18	21	360	346	328	326	324	316	325
11	316	307	309	311	302	297	301	330	316	308	54	90	86	62	55	58	46	35	349	304	297	279	277	277
12	263	259	232	225	222	200	201	216	194	189	166	169	160	153	145	151	176	175	195	198	203	203	197	177
13	176	170	163	170	172	185	177	181	189	194	198	191	174	169	179	173	162	156	162	168	166	149	163	143
14	0	274	275	248	266	264	261	261	310	15	76	94	92	101	96	98	98	97	75	48	313	293	352	70
15	104	147	118	171	106	7	294	279	316	11	58	65	70	76	65	59	38	19	359	355	346	343	340	339
16	340	338	332	315	317	307	313	315	338	14	56	8	358	55	44	48	34	36	31	24	34	4	321	318
17	318	311	337	306	315	325	330	321	329	346	1	21	29	45	24	38	42	37	11	321	336	317	295	299
18	305	328	333	334	336	340	344	343	351	6	359	10	4	1	7	16	7	5	359	11	22	10	355	344
19	345	351	24	5	337	340	24	334	348	355	7	5	350	2	1	343	337	3	9	5	13	348	322	20
20	36	351	332	357	331	334	339	323	343	350	10	5	1	3	347	347	349	344	342	328	321	319	321	317
21	317	313	311	306	304	305	307	306	335	358	3	29	43	53	76	83	288	327	312	301	263	251	227	217
22	152	274	244	260	269	249	264	255	229	102	142	148	146	163	165	159	158	158	157	154	151	151	150	137
23	142	136	143	143	139	126	145	135	113	124	120	130	118	107	112	118	109	91	96	106	119	90	320	274
24	239	233	226	194	298	288	284	297	303	306	302	327	329	327	347	342	349	38	61	59	92	95	263	254
25	236	245	238	220	197	178	175	188	182	210	180	212	196	196	181	187	183	181	177	185	183	190	194	186
26	191	196	201	200	202	194	183	187	170	180	158	163	336	349	349	344	347	342	344	341	338	334	343	345
27	340	347	341	343	337	338	338	338	336	340	339	334	338	344	351	352	351	355	348	337	340	339	349	330
28	324	328	322	317	320	315	314	312	319	322	320	322	335	344	347	16	6	334	335	322	320	301	3	237

Table 3-23. Wind Direction Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET TRUE WS (MPH) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	4.3	5.3	2.9	0.8	1.3	0.3	1.0	1.4	0.8	1.9	3.0	1.3	0.9	1.0	2.3	3.4	3.1	0.2	0.3	0.2	0.1	0.0	0.0	0.0
2	0.2	0.6	0.4	0.6	0.4	2.0	1.0	0.5	0.4	4.2	4.9	5.3	5.2	5.2	6.0	4.9	4.8	6.9	4.0	3.3	2.0	3.2	4.1	5.7
3	2.6	5.8	5.9	6.1	5.1	2.7	0.9	0.6	1.3	2.6	4.8	3.4	4.7	4.5	4.3	2.8	5.8	4.5	3.4	1.7	2.4	0.4	0.1	0.0
4	0.1	0.0	0.7	0.3	0.2	0.0	0.4	0.0	0.1	0.2	2.0	5.0	3.3	4.6	4.8	2.1	0.9	3.0	2.2	2.3	3.8	0.9	0.9	0.2
5	0.0	0.8	0.2	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1	2.2	1.9	2.2	3.9	4.1	2.0	3.7	4.1	2.0	3.9	3.4	5.1	5.7
6	4.7	4.0	2.7	0.5	0.3	2.3	0.5	0.3	0.1	0.8	1.2	2.2	3.4	5.0	4.7	5.0	4.4	5.1	6.9	7.5	6.2	8.1	8.4	8.7
7	7.6	7.2	6.7	6.8	8.2	6.7	6.3	7.5	8.6	10.1	10.6	13.6	13.7	12.0	9.9	9.7	9.5	7.1	6.2	7.2	5.9	6.0	7.3	6.2
8	5.1	4.7	4.6	4.7	5.6	5.0	6.6	6.6	7.3	10.4	11.4	10.5	11.8	9.9	10.0	9.4	9.1	7.2	7.0	6.7	5.3	6.3	7.7	6.9
9	7.2	9.0	6.6	7.4	7.4	8.5	9.3	7.0	7.1	7.5	9.7	9.7	10.5	10.3	9.4	9.4	9.1	8.3	6.7	7.8	8.0	7.8	8.3	8.4
10	8.4	8.4	7.8	7.2	6.6	7.5	7.4	7.2	7.5	9.2	7.4	8.0	8.4	8.5	8.3	8.3	8.0	6.3	5.3	5.7	5.6	5.3	6.1	7.0
11	5.9	5.7	6.5	5.0	6.6	4.9	5.9	3.6	3.3	4.2	2.2	5.1	6.2	6.1	4.7	4.7	3.0	2.0	0.7	1.8	2.5	2.7	3.2	3.7
12	3.0	2.5	2.5	1.8	1.7	1.7	2.0	3.0	3.0	3.8	4.6	4.7	5.2	4.2	2.9	2.1	1.7	1.9	1.7	1.4	1.3	1.7	2.2	2.1
13	2.1	2.2	2.1	2.6	2.8	3.8	3.5	2.9	4.1	4.8	5.4	6.3	5.9	6.8	6.3	5.1	5.2	3.7	2.6	1.8	1.2	0.8	1.1	0.3
14	0.0	0.7	1.2	2.1	2.4	0.4	0.8	3.2	1.0	1.1	1.4	5.4	6.6	6.3	7.6	7.5	5.8	5.2	3.9	0.9	1.2	0.9	0.4	1.1
15	4.3	1.6	3.0	1.1	1.6	1.9	2.5	3.0	1.8	2.7	4.6	4.8	5.2	5.4	5.2	6.1	4.9	3.3	2.8	2.8	3.3	3.7	3.0	3.8
16	3.4	2.9	2.5	4.1	4.1	5.2	4.6	4.8	6.6	4.7	3.7	4.0	4.9	7.1	6.3	6.8	5.4	4.6	4.8	2.8	2.5	1.7	1.8	3.3
17	4.3	4.5	2.6	5.6	3.1	3.2	3.9	3.9	4.5	5.0	3.8	4.0	4.9	3.4	4.4	4.4	4.8	4.1	1.4	1.4	2.3	2.3	3.6	2.6
18	1.6	3.1	4.3	5.1	4.2	5.5	3.2	2.5	4.2	5.1	4.8	5.4	6.4	6.9	4.8	5.2	6.1	7.2	5.6	4.1	4.5	4.2	4.9	4.5
19	4.2	4.5	3.5	2.2	2.4	3.6	2.8	4.2	7.4	8.5	6.3	4.4	6.4	5.2	5.5	5.1	2.8	4.0	4.1	4.5	3.0	1.2	3.3	3.8
20	4.0	2.2	4.6	3.8	4.2	4.5	4.5	5.3	7.1	6.9	6.7	6.7	7.1	7.0	8.8	8.8	8.2	7.6	6.6	6.2	6.2	5.7	5.6	5.6
21	6.0	5.7	5.6	5.8	5.3	5.0	5.1	4.5	4.8	5.4	5.3	4.3	5.5	5.2	3.2	2.3	0.5	3.5	3.4	3.6	3.5	4.4	0.8	0.5
22	0.6	0.4	0.1	0.3	1.4	0.7	0.9	1.7	0.7	1.7	2.3	4.6	5.1	5.7	5.2	5.2	3.5	2.7	1.9	2.1	2.2	1.5	2.0	2.5
23	2.2	3.2	2.3	1.8	0.9	1.7	2.0	3.5	3.4	3.6	4.4	3.2	4.0	5.3	4.2	4.2	4.7	3.2	2.1	2.6	1.3	0.0	0.5	0.5
24	0.9	0.8	1.8	1.4	3.3	3.3	5.3	6.8	7.0	5.4	3.7	5.1	4.5	5.3	4.5	4.8	4.7	4.7	4.3	2.8	3.8	2.9	1.2	4.0
25	0.9	3.1	3.4	2.6	2.8	3.3	3.1	3.6	2.8	3.9	3.4	3.5	4.3	4.9	4.5	4.3	5.0	4.0	3.7	4.8	3.8	4.2	4.4	4.2
26	6.0	7.4	7.9	7.3	6.3	5.4	5.5	4.6	4.6	5.1	6.7	6.0	5.1	4.3	9.0	10.4	11.2	11.1	10.8	10.4	10.7	9.0	9.8	9.4
27	10.3	8.7	9.3	8.8	8.6	8.9	9.7	9.7	9.5	9.2	8.9	7.5	7.0	7.1	7.1	5.8	6.8	5.8	7.1	6.9	7.0	7.7	6.0	5.3
28	5.3	5.7	5.2	4.5	3.6	2.6	2.9	3.5	3.1	4.0	4.0	5.1	7.1	11.9	9.8	6.2	4.2	5.5	4.4	3.7	3.7	2.8	0.4	1.5

Table 3-24. Wind Speed Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET TRUE Sigθ1 (deg) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	20.3	25.1	22.6	35.2	25.2	29.3	26.7	21.3	23.5	24.9	22.9	22.3	23.7	24.2	21.9	19.4	22.4	34.0	37.5	29.2	44.6	35.5	23.1	40.4
2	35.1	54.3	39.4	35.9	33.1	30.0	30.1	41.9	34.4	26.7	21.0	20.4	20.5	20.7	21.5	22.3	24.0	20.2	21.8	19.7	23.1	27.6	20.4	21.2
3	26.8	21.9	20.8	22.5	21.5	20.5	25.3	28.9	28.1	28.4	22.3	21.5	22.1	21.2	22.4	21.0	24.8	21.0	19.7	23.4	22.9	20.8	25.9	36.8
4	26.0	39.7	24.6	35.3	38.4	42.8	39.9	34.1	36.9	24.9	28.6	22.4	21.3	21.3	20.5	24.7	23.4	26.4	19.4	23.0	19.7	31.5	25.7	61.1
5	27.3	33.3	22.9	25.9	26.5	23.5	14.3	24.2	29.1	37.1	46.0	24.0	22.7	22.1	21.2	20.4	23.6	22.7	22.7	27.6	20.9	20.9	20.7	21.8
6	20.2	19.2	18.5	22.0	27.0	19.7	29.2	29.2	30.1	31.9	32.4	33.5	22.7	25.4	26.3	25.2	25.1	29.8	21.5	21.9	26.9	22.5	22.9	20.8
7	20.7	19.2	20.1	22.3	22.3	26.9	27.6	25.3	26.7	23.8	25.9	24.9	25.3	27.3	29.8	31.2	28.6	28.9	31.8	30.2	29.6	27.8	23.1	22.1
8	33.4	29.1	28.4	28.6	21.5	24.5	24.7	29.5	30.6	29.8	30.8	32.6	32.0	31.2	29.2	30.8	29.8	31.8	31.2	34.7	31.7	26.4	25.3	26.5
9	27.0	20.8	27.0	20.7	17.5	20.3	22.4	22.5	23.0	22.5	28.7	29.5	30.1	31.5	32.4	30.4	26.5	24.8	25.3	18.8	19.6	16.9	17.1	18.2
10	18.5	19.8	21.4	20.4	24.3	20.3	17.2	18.7	24.2	27.9	34.5	33.5	31.7	32.5	31.9	30.4	29.0	30.4	22.4	16.8	16.4	17.1	13.9	14.2
11	14.8	12.2	17.9	15.2	13.6	14.7	14.4	21.5	24.1	21.5	50.0	27.8	27.3	23.2	20.2	21.2	24.5	20.4	28.1	13.5	17.4	15.0	14.6	11.1
12	12.6	11.6	10.5	9.0	12.7	14.2	14.8	14.6	31.4	41.0	44.9	49.5	48.1	43.9	32.8	30.6	32.2	29.5	33.9	26.2	23.2	18.7	22.1	30.6
13	24.2	28.0	31.8	32.5	29.5	30.4	33.5	38.4	33.6	31.7	32.9	36.4	48.7	42.1	40.1	43.3	37.8	33.7	32.4	27.6	22.9	19.0	14.9	81.4
14	97.6	17.1	24.1	27.3	16.9	30.7	13.5	11.6	43.0	51.7	57.5	48.4	23.7	29.8	22.4	23.6	23.2	20.9	18.7	25.7	14.9	43.9	77.9	53.7
15	26.8	27.5	28.7	27.1	56.4	46.6	22.9	15.5	40.4	34.8	27.6	20.9	23.2	19.7	23.4	21.4	24.0	28.1	27.8	26.5	22.1	24.3	22.9	20.4
16	21.0	22.0	24.0	15.2	14.1	12.4	13.1	13.8	20.4	28.1	30.0	35.1	35.0	26.4	28.5	26.9	23.7	22.5	27.4	25.6	22.1	22.6	12.7	13.1
17	16.1	15.3	22.9	13.6	25.9	15.9	16.4	17.2	18.5	26.2	27.9	31.4	28.0	29.8	27.3	27.0	21.8	21.0	26.9	19.6	26.4	21.4	19.0	22.5
18	31.5	17.7	15.0	17.5	20.8	17.5	18.8	20.1	25.3	31.3	32.2	30.1	29.5	28.5	30.6	31.7	30.4	32.6	29.8	29.7	32.2	31.1	27.4	21.2
19	21.8	24.2	27.0	21.3	21.8	24.3	25.4	20.4	26.2	29.6	31.3	32.2	25.6	30.7	29.8	28.1	28.1	28.6	30.3	30.3	32.3	57.1	19.8	28.0
20	19.7	29.0	14.7	28.5	16.5	21.3	19.7	14.8	24.8	28.6	33.0	32.3	32.9	29.0	24.5	26.2	27.4	22.6	21.3	16.9	14.7	14.9	14.2	13.2
21	14.6	12.8	11.6	11.4	11.9	11.1	11.7	13.5	22.9	32.2	33.7	34.7	28.4	24.6	19.2	21.3	26.7	18.2	21.6	17.4	22.0	12.8	17.6	72.8
22	18.3	71.9	84.0	69.8	20.9	22.6	72.9	15.5	43.0	45.1	41.0	38.8	37.4	42.8	40.0	35.3	33.9	32.3	27.5	26.9	28.4	24.3	24.1	25.8
23	24.7	22.4	26.7	22.3	25.4	22.9	26.4	26.5	26.7	33.3	26.9	23.2	32.2	24.8	31.2	29.6	24.2	19.8	19.0	15.5	14.7	90.2	65.1	38.4
24	60.0	17.2	19.7	21.9	18.5	42.3	19.7	15.8	14.9	13.1	18.1	15.7	17.6	17.2	24.8	21.3	26.9	23.1	24.6	27.8	21.0	30.3	44.4	25.7
25	53.2	29.2	15.7	22.0	18.0	25.1	31.3	28.6	32.8	30.2	34.4	29.5	37.2	35.2	38.8	35.7	39.3	38.3	40.5	35.3	42.1	35.6	31.2	36.2
26	39.1	38.4	36.9	35.5	35.1	39.1	41.2	45.5	48.8	46.6	43.4	49.2	38.5	32.8	28.9	27.1	28.4	23.8	25.4	20.5	20.1	18.8	22.4	23.5
27	22.5	26.4	19.2	22.6	19.4	19.0	18.8	17.7	16.5	19.6	18.5	17.2	19.6	23.4	27.3	29.1	28.1	30.2	27.0	18.3	19.9	18.7	28.1	17.9
28	16.4	15.5	15.3	14.3	11.9	12.5	46.0	16.4	16.4	14.1	12.6	14.1	19.7	23.4	27.1	35.0	37.8	19.8	22.4	13.5	15.0	51.5	54.4	72.9

Table 3-25. Sigma Theta Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET TRUE VWS (MPH) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	-0.1	-0.3	0.0	0.0	-0.1	0.0	-0.2	-0.2	-0.2	-0.2	-0.3	-0.2	-0.2	-0.3	-0.2	-0.2	-0.4	0.0	0.0	0.1	0.0	0.0	0.1	0.0
2	0.0	-0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	-0.3	-0.3	-0.4	-0.5	-0.2	-0.3	-0.4	-0.3	-0.4	-0.3	0.0	-0.1	-0.1	-0.2	-0.3
3	-0.1	-0.3	-0.4	-0.3	-0.2	0.0	0.1	0.0	-0.1	-0.2	-0.4	-0.3	-0.2	-0.4	-0.3	-0.3	-0.4	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0	0.0	-0.2	-0.3	-0.3	-0.2	-0.2	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.0	-0.2
5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.4	-0.3	-0.2	-0.2	-0.1	-0.2	-0.1	-0.2	-0.5
6	-0.3	-0.3	0.0	0.0	0.0	-0.1	0.1	0.0	0.1	0.0	-0.1	-0.2	-0.3	-0.2	-0.1	-0.1	-0.1	0.0	0.1	0.0	0.0	-0.2	-0.5	-0.3
7	-0.3	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0	-0.2	-0.3	-0.3	-0.1	0.1	-0.3	-0.2	-0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
8	0.0	0.0	0.1	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	-0.1	-0.2	-0.1	-0.1	0.0	-0.2	-0.3	0.0	-0.2	0.0	0.1	0.1	0.0	0.0
9	-0.1	0.0	0.1	0.0	0.0	-0.1	0.0	-0.1	0.1	-0.1	-0.2	-0.4	0.0	-0.3	-0.4	-0.2	-0.2	0.0	0.0	0.1	-0.1	-0.1	0.0	-0.1
10	-0.2	-0.1	-0.1	-0.1	0.0	-0.1	-0.1	-0.1	0.0	0.1	-0.1	-0.3	-0.1	0.0	-0.3	0.0	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1
11	0.0	0.2	0.3	0.1	0.2	0.0	0.2	0.0	0.0	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	0.1
12	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.3	0.3	0.3	0.3	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1
13	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.5	0.6	0.5	0.6	0.6	0.5	0.4	0.3	0.2	0.1	0.1	0.0	0.0	0.0
14	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-0.1	0.0	-0.1	0.0	-0.1	-0.2	0.0	0.0	-0.2	0.0	0.0	0.0	0.0	-0.1
15	-0.1	0.1	0.0	0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	-0.1	-0.1	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
16	0.0	0.1	0.0	0.2	0.2	0.3	0.1	0.1	0.0	0.0	-0.1	0.0	0.0	-0.3	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1
17	0.1	0.2	0.1	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	-0.2	-0.6	-0.4
18	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	-0.1	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.1	0.0	0.0	-0.1	0.0	0.0	0.0	0.1	0.0
20	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.0	-0.1	0.0	-0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
21	0.1	0.2	0.2	0.4	0.3	0.3	0.3	0.1	0.1	0.0	0.1	-0.2	0.0	-0.2	-0.1	-0.1	0.0	0.1	-0.2	-0.2	-0.3	-0.1	0.0	0.0
22	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.1	0.1	0.3	0.4	0.4	0.5	0.4	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
23	0.1	0.2	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24	0.0	0.0	0.0	0.0	0.0	-0.4	-0.3	0.2	0.3	0.3	-0.2	0.1	0.0	0.1	0.1	0.0	0.1	0.1	-0.1	-0.1	-0.1	0.0	-0.1	0.0
25	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.4	0.5	0.4	0.5	0.5	0.3	0.4	0.4	0.3	0.4	0.4	0.4
26	0.6	0.7	0.6	0.8	0.7	0.7	0.5	0.5	0.3	0.6	0.4	0.5	0.1	0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.3	-0.1	0.0	0.0
27	0.0	0.1	0.0	0.0	-0.1	0.0	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
28	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.0	-0.1	-0.1	0.0	0.1	0.0	0.1	0.1	0.0	-0.2	-0.1	0.1

Table 3-26. Vertical Wind Speed Monthly Summary Site 2

MONTHLY SUMMARY REPORT

TRUE GEOTHERMAL

LOCATION: SITE 2, MET TRUE SIG W (DEG) DATA FOR: FEB 1990

HOURS (HST)

HR-END DAY	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.2	0.3	0.2
2	0.3	0.4	0.4	0.3	0.3	0.5	0.3	0.3	0.4	0.6	0.7	0.6	0.7	0.7	0.6	0.6	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.6
3	0.5	0.7	0.7	0.6	0.6	0.5	0.5	0.4	0.4	0.5	0.5	0.6	0.7	0.6	0.6	0.6	0.6	0.7	0.5	0.4	0.5	0.3	0.2	0.3
4	0.2	0.2	0.4	0.2	0.3	0.2	0.3	0.2	0.3	0.5	0.6	0.8	0.7	0.7	0.7	0.8	0.7	0.6	0.3	0.3	0.5	0.2	0.3	0.3
5	0.2	0.4	0.3	0.2	0.1	0.2	0.1	0.2	0.3	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	0.4
6	0.6	0.5	0.4	0.2	0.3	0.4	0.2	0.3	0.4	0.5	0.7	0.8	0.8	0.9	0.8	0.8	0.7	0.8	0.6	0.6	0.8	0.8	0.7	0.9
7	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.8	1.0	1.0	1.2	1.4	1.6	1.2	1.4	1.3	1.3	1.0	0.9	1.0	0.9	0.7	0.6	0.5
8	0.4	0.5	0.4	0.5	0.3	0.4	0.5	0.7	0.9	1.4	1.6	1.4	1.6	1.3	1.4	1.2	1.2	1.1	0.9	0.8	0.7	0.7	0.5	0.7
9	0.6	0.6	0.7	0.5	0.6	0.6	0.6	0.5	0.6	0.5	1.1	1.1	1.4	1.3	1.1	1.0	0.9	0.8	0.5	0.5	0.5	0.5	0.5	0.5
10	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.9	0.9	0.9	1.0	1.0	0.9	1.0	0.9	0.7	0.4	0.4	0.3	0.3	0.4	0.4
11	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	0.3	0.4	0.3	0.5	0.5	0.4	0.5	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2
12	0.2	0.1	0.1	0.0	0.1	0.1	0.2	0.3	0.5	0.7	1.0	1.0	1.0	0.8	0.5	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3
13	0.3	0.3	0.3	0.4	0.4	0.6	0.6	0.6	0.7	0.8	0.9	1.2	1.2	1.3	1.2	1.0	0.9	0.7	0.4	0.3	0.2	0.1	0.1	0.0
14	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.2	0.2	0.4	0.5	0.6	0.5	0.6	0.7	0.7	0.6	0.4	0.3	0.1	0.1	0.2	0.1	0.2
15	0.4	0.3	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.5	0.4	0.3	0.2	0.2	0.2	0.2
16	0.2	0.3	0.2	0.4	0.3	0.4	0.3	0.4	0.5	0.6	0.4	0.5	0.6	0.6	0.7	0.7	0.6	0.5	0.6	0.4	0.3	0.2	0.2	0.3
17	0.3	0.4	0.2	0.5	0.3	0.1	0.2	0.2	0.3	0.4	0.5	0.5	0.7	0.3	0.5	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0.1	0.1
18	0.1	0.2	0.3	0.4	0.3	0.3	0.2	0.2	0.4	0.7	0.6	0.6	0.8	0.8	0.6	0.8	0.9	1.0	0.6	0.5	0.8	0.6	0.6	0.2
19	0.3	0.4	0.5	0.2	0.1	0.2	0.3	0.3	0.7	0.9	0.8	0.6	0.6	0.7	0.7	0.5	0.4	0.5	0.5	0.5	0.4	0.2	0.3	0.5
20	0.4	0.2	0.3	0.5	0.3	0.3	0.3	0.4	0.6	0.7	0.8	0.8	0.9	0.8	0.7	0.7	0.7	0.5	0.4	0.4	0.4	0.4	0.3	0.3
21	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4	0.6	0.6	0.6	0.6	0.5	0.2	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.1	0.1
22	0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.2	0.3	0.5	0.8	1.0	1.0	1.0	0.9	0.6	0.5	0.3	0.3	0.3	0.2	0.3	0.3
23	0.3	0.4	0.3	0.2	0.1	0.2	0.2	0.4	0.4	0.5	0.6	0.4	0.6	0.5	0.6	0.6	0.5	0.3	0.1	0.1	0.0	0.0	0.1	0.1
24	0.1	0.0	0.1	0.2	0.2	0.2	0.4	0.5	0.5	0.4	0.2	0.3	0.3	0.4	0.4	0.3	0.5	0.5	0.4	0.2	0.3	0.4	0.3	0.3
25	0.2	0.2	0.2	0.3	0.3	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.8	0.8	0.8	0.8	1.0	0.7	0.7	0.8	0.7	0.7	0.7	0.8
26	1.1	1.3	1.3	1.3	1.1	1.1	1.1	0.9	0.9	1.1	1.3	1.2	0.5	0.5	0.8	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.7
27	0.7	0.8	0.6	0.7	0.5	0.5	0.6	0.6	0.5	0.6	0.6	0.5	0.5	0.5	0.7	0.5	0.7	0.6	0.6	0.4	0.4	0.5	0.6	0.4
28	0.4	0.4	0.4	0.3	0.2	0.2	0.2	0.3	0.2	0.3	0.3	0.4	0.6	0.8	0.7	1.0	0.7	0.4	0.4	0.3	0.3	0.2	0.1	0.2

Table 3-27. Sigma W Monthly Summary Site 2

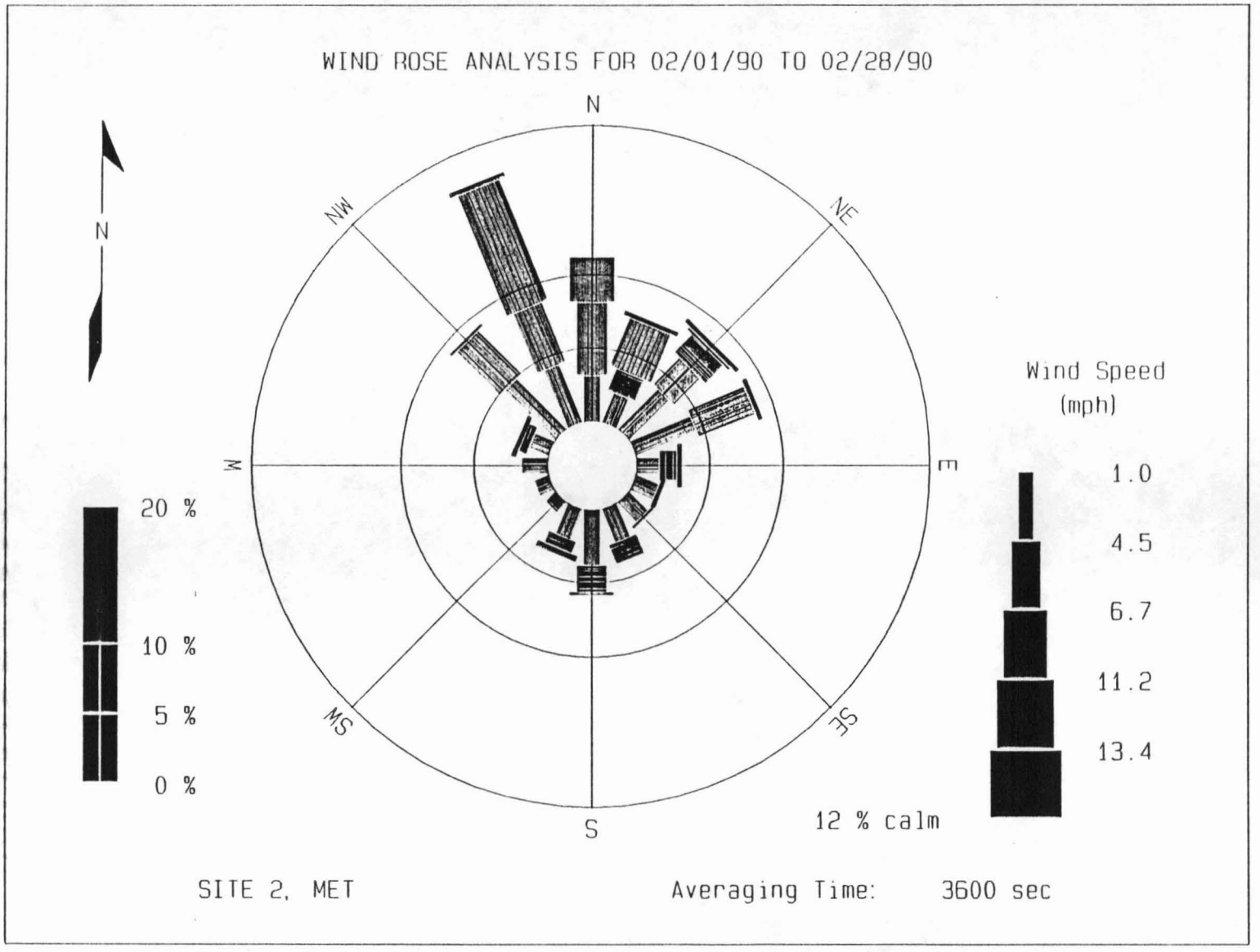

Figure 3-2. Wind Rose Analysis Site 2

WD (DEG) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	360.	02/10/90	17:00:00
Second Highest:	359.	02/01/90	21:00:00
Lowest Value:	0.	02/14/90	00:00:00

Arithmetic Mean:	187.	10.000 Percentile:	21.
Standard Deviation:	130.	20.000 Percentile:	44.
		30.000 Percentile:	65.
Geometric Mean:	115.	40.000 Percentile:	118.
Standard Deviation:	4.	50.000 Percentile:	181.
		60.000 Percentile:	263.
Valid Data:	672	70.000 Percentile:	317.
Invalid Data:	0	80.000 Percentile:	335.
Missing Data:	0	90.000 Percentile:	344.
Data Recovery:	100.00%	100.000 Percentile:	360.

SITE 2, MET TRUE Averaging Time: 3600 sec

Table 3-28. Wind Direction Summary Statistics Site 2

WS (MPH) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	13.7	02/07/90	12:00:00
Second Highest:	13.6	02/07/90	11:00:00
Lowest Value:	0.0	02/01/90	21:00:00

Arithmetic Mean:	4.4	10.000 Percentile:	0.8
Standard Deviation:	2.7	20.000 Percentile:	1.9
		30.000 Percentile:	2.8
Geometric Mean:	3.2	40.000 Percentile:	3.6
Standard Deviation:	2.7	50.000 Percentile:	4.3
		60.000 Percentile:	4.9
Valid Data:	672	70.000 Percentile:	5.5
Invalid Data:	0	80.000 Percentile:	6.7
Missing Data:	0	90.000 Percentile:	8.1
Data Recovery:	100.00%	100.000 Percentile:	13.7

SITE 2, MET TRUE Averaging Time: 3600 sec

Table 3-29. Wind Speed Summary Statistics Site 2

Sigé1 (deg) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	97.6	02/14/90	00:00:00		
Second Highest:	90.2	02/23/90	21:00:00		
Lowest Value:	9.0	02/12/90	03:00:00		
Arithmetic Mean:	26.9			10.000 Percentile:	15.7
Standard Deviation:	10.9			20.000 Percentile:	19.6
				30.000 Percentile:	21.3
Geometric Mean:	25.2			40.000 Percentile:	22.9
Standard Deviation:	1.4			50.000 Percentile:	25.1
				60.000 Percentile:	27.3
Valid Data:	672			70.000 Percentile:	29.5
Invalid Data:	0			80.000 Percentile:	32.2
Missing Data:	0			90.000 Percentile:	38.4
Data Recovery:	100.00%			100.000 Percentile:	97.6

SITE 2, MET TRUE Averaging Time: 3600 sec

Table 3-30. Sigma Theta Summary Statistics Site 2

VWS (MPH) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	0.8	02/26/90	03:00:00		
Second Highest:	0.7	02/26/90	04:00:00		
Lowest Value:	-0.6	02/17/90	22:00:00		
Arithmetic Mean:	0.0			10.000 Percentile:	-0.2
Standard Deviation:	0.2			20.000 Percentile:	-0.1
				30.000 Percentile:	0.0
Geometric Mean:	0.0			40.000 Percentile:	0.0
Standard Deviation:	1.0			50.000 Percentile:	0.0
				60.000 Percentile:	0.0
Valid Data:	672			70.000 Percentile:	0.0
Invalid Data:	0			80.000 Percentile:	0.1
Missing Data:	0			90.000 Percentile:	0.2
Data Recovery:	100.00%			100.000 Percentile:	0.8

SITE 2, MET TRUE Averaging Time: 3600 sec

Table 3-31. Vertical Wind Speed Summary Statistics Site 2

SIG W (DEG) SUMMARY STATISTICS FOR 02/01/90 - 02/28/90

Highest Value:	1.620	02/08/90	10:00:00
Second Highest:	1.600	02/07/90	12:00:00
Lowest Value:	0.000	02/14/90	00:00:00

Arithmetic Mean:	0.495	10.000 Percentile:	0.178
Standard Deviation:	0.291	20.000 Percentile:	0.257
		30.000 Percentile:	0.316
Geometric Mean:	0.000	40.000 Percentile:	0.375
Standard Deviation:	1.000	50.000 Percentile:	0.454
		60.000 Percentile:	0.514
Valid Data:	672	70.000 Percentile:	0.593
Invalid Data:	0	80.000 Percentile:	0.691
Missing Data:	0	90.000 Percentile:	0.889
Data Recovery:	100.00%	100.000 Percentile:	1.620

SITE 2, MET TRUE Averaging Time: 3600 sec

Table 3-32. Sigma W Summary Statistics Site 2

MEASUREMENT TECHNOLOGIES

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